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PATENT

Attorney Docket No. 442155/PALL

1AP20 Rec'd PCT 17 FEB 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ALEXANDRATOS et al.

Group Art Unit: Unassigned

Application No. Unassigned

Examiner: Unassigned

Filed: February 17, 2006

For: ARSENIC REMOVAL

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop PCT
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

☒ **within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under

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37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

- ☐ **after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:

☐ the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).

or

☐ the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).

- ☐ **after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).

- ☐ **after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).

NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

Copies of the References

- ☐ Copies of the references listed on the enclosed Form 1449 are enclosed herewith.
- ☒ Copies of U.S. patents and patent applications that are listed on the accompanying Form 1449 are not enclosed herewith. Copies of other references identified on the accompanying Form 1449 are enclosed herewith.
- ☐ Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3). An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3).
- ☐ A copy of the foreign search report is enclosed herewith.

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- ☐ The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		Status (<i>check one</i>)		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1.				
2.				
3.				

Statement under 37 CFR 1.97(e)

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

Statement under 37 CFR 1.704(d)

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

Fees and Method of Payment of Fees

- ☒ **No fee** is owed by the applicant(s).
- ☐ Charge Deposit Account No. 12-1216 in the amount of \$180.00 under 37 CFR 1.17(p). (A duplicate copy of this communication is enclosed for that purpose.)

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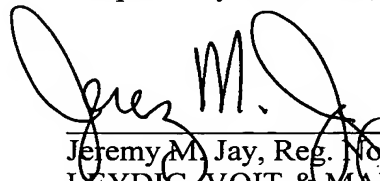
Authorization to Charge Additional Fees

- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

Instructions as to Overpayment

- ☒ Credit Account No. 12-1216.
☐ Refund

Respectfully submitted,



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Date: 17 Feb. 2006



Substitute for form 1449A/B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known 012200542

Sheet	1	of	2	Application Number	Unassigned 012200542
				Filing Date	February 17, 2006
				First Named Inventor	Spiro Alexandratos
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
				Attorney Docket Number	442155/PALL

U.S. PATENT DOCUMENTS

Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate
		Application or Patent Number	Kind Code			
	A 1	4,621,103		Kosuge et al.	11/4/1986	
	A 2	6,200,481		Nambu et al.	3/13/2001	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Doc. No.	Foreign Patent Document			Name of Patentee or Applicant	Date of Publication	Translation	
		Office	Application or Patent Number	Kind Code			Yes	No**
	A 3	JP	58146448		Unitika Ltd. (Abstract only)	9/1/1983		
	A 4	JP	60102948		Mitsubishi Chemical Industries Co., Ltd. (Abstract only)	6/7/1985		
	A 5	JP	2002233864		Nippon Denko Co., Ltd. (Abstract only)	8/20/2002		
	A 6	JP	2002226517		Mitsubishi Chemical Corp. and Nippon Rensui Co. (Abstract only)	8/14/2002		

OTHER - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No**
	A 7	Alexandratos, S., et al., "A new highly selective resin for the removal of arsenate in groundwater", <i>American Chemical Society</i> , Abstract of Papers, 226th ACS National Meeting, September 2003 (Abstract only)		
	A 8	Oi, T., et al., "Boron isotope fractionation in liquid chromatography with boron-specific resins as column packing material", <i>Separation Science and Technology</i> , 32(11):1821-1834, 1997 (Abstract only)		
	A 9	Sonoda, A., et al., "pH-Dependence of The Fractionation of Boron Isotopes with N-Methyl-D-Glucamine Resin in Aqueous Solution Systems", <i>Bulletin of the Chemical Society of Japan</i> , 73(5):1131-1133, 2000 (Abstract only)		
	A 10	Hiroyuki Sekiguchi, "Glucamine type chelating resin capable of highly effective adsorbing boron", <i>Kogyo Zairyo</i> , 49(8):65-68, 2001 (Abstract only)		
	A 11	Popat, K., et al., "Synthesis of a boron-specific resin for the removal of boron from seawater", <i>Journal of Polymer Materials</i> , 6(4):231-6, 1989 (Abstract only)		
	A 12	Yoshimura, K., et al., "Complexation of boric acid with N-methyl-D-glucamine group in solution and in crosslinked polymer", <i>Journal of the Chemical Society</i> , 94(5):683-689, 1998 (Abstract only)		
	A 13	Badruk, M., et al., "Removal of boron from wastewater of geothermal power plant by selective ion-exchange resins. I. Batch sorption-elution studies", <i>Separation Science and Technology</i> , 34(13):2553-2569, 1999 (Abstract only)		
	A 14	Chacko, A., et al., <i>Journal of Macromolecular Science</i> , Part A- Pure and Applied Chemistry, A40(10):1035-1056, 2003		
	A 15	U.S. Environmental Protection Agency, "Arsenic in Drinking Water", pages 1-4, retrieved from the Internet: http://www.epa.gov/savewater/arsenic.html , 9/1/2003		

Examiner Signature	Date Considered
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* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).

+ An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).

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(Use as many sheets as necessary)

Complete if Known

Application Number	Unassigned
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Filing Date

First Named Inventor

Group Art Unit

Examiner Name

Attorney Docket Number

Unassigned

Spiro Alexandratos

Unassigned

Unassigned

442155/PALL

Sheet

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OTHER - NON PATENT LITERATURE DOCUMENTS

[illegible]

**Examiner
Signature**

Date
Considered

- * A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).
- + An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).